

Urban Minority Community Safety and its Impact on Physical Activity: The Center for Promoting Health and Health Equity-Racial and Ethnic Approaches to Community Health (CPHHE-REACH) Initiative

Omofolasade Kosoko-Lasaki, M.D., M.S.P.H., M.B.A., Olúgbémiga T. Ekúndayò, M.D., M.P.H., Dr.P.H., Jeffrey Smith, Ph.D., N.C.C., P.L.M.H.P., Olivia Ochuba, B.S., M.S., Gavin Hayashi, B.S., Raheem Sanders, B.A., M.P.H., Richard Brown, Ph.D., John R. Stone, M.D., Ph.D.

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Abstract: Background/Purpose: Daily physical activity is known to improve personal health and well-being and can often be influenced by one's living environment. A qualitative secondary data analysis of a focus group study, performed by the Creighton University Center for Promoting Health and Health Equity (CPHHE) – Racial and Ethnic Approaches to Community Health (REACH), assesses behavioral changes in individuals who participated in newly established physical activities in faith-based organizations, local residential towers, and the local community health center.

Method: Applying thematic analysis within the Health Belief Model framework, the investigators further investigated the relationships between its constructs and levels of physical activity in urban minority neighborhoods.

Results: Results indicated that residents who perceived their neighborhoods as unsafe had a negative attitude toward physical activity. In contrast, building social relationships and camaraderie that enhanced social cohesion were major themes that increased participants' self-efficacy, resulting in positive changes in health behavior.

Conclusion: Community partnerships had a positive impact on motivating individuals to live healthier lifestyles. An interesting concept was that of community efficacy, which reflects the community's confidence in its ability to generate behavioral changes in individuals.

Keywords: REACH ■ Community intervention ■ African american ■ Physical activities ■ Chronic diseases

Author affiliations: Omofolasade Kosoko-Lasaki, Creighton University Center for Promoting Health and Health Equity (CPHHE) and Health Sciences-Multicultural and Community Affairs (HS-MACA), Racial and Ethnic Approaches to Community Health (REACH) Grant, School of Medicine, USA; Olúgbémiga T. Ekúndayò, Department of Allied Health, College of Health Professions, Northern Kentucky University, USA; Jeffrey Smith, Creighton University

College of Arts and Sciences, USA; Olivia Ochuba, Creighton University School of Medicine, USA; Gavin Hayashi, Creighton University School of Medicine, USA; Raheem Sanders, Creighton University Center for Promoting Health and Health Equity (CPHHE), Racial and Ethnic Approaches to Community Health (REACH) Grant, USA; Richard Brown, Creighton University Center for Promoting Health and Health Equity (CPHHE), Racial and Ethnic Approaches to Community Health (REACH) Grant, School of Medicine, USA; John R. Stone, Creighton University School of Medicine Center for Promoting Health and Health Equity (CPHHE), Racial and Ethnic Approaches to Community Health (REACH) Grant, School of Medicine, USA

Correspondence: Omofolasade Kosoko-Lasaki, M.D., M.S.P.H., M.B.A., Preventive Medicine & Public Health, Health Sciences Multicultural and Community Affairs, Creighton University, 2500 California Plaza, Omaha, NE 68178-0001, USA, email: skosoko@creighton.edu

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INTRODUCTION/BACKGROUND

Regular physical activity can improve people's health. Benefits include decreased risk of heart disease and stroke, lower blood pressure and weight, prevention or improvement of other non-communicable chronic diseases and much more (WHO, 2018).¹ Examples of chronic diseases that can be improved by physical activity include heart disease, stroke, certain cancers, type 2 diabetes and depression (U.S. Department of Health and Human Services, 2015).² The U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), physical activity guidelines suggest that, for substantial health benefits, adults should perform about 150 min of moderate intensity aerobic physical activity every week (USDHHS, Office of Disease Prevention and Health Promotion, 2008).³ Children and adolescents should perform 60 min or more of physical activity daily (U.S. Department of Health and Human Services, 2015).²

Community environmental barriers can prevent individuals from performing physical activity (Dadpour

et al., 2016).⁴ Factors include safety, security, environmental aesthetics and convenience. Especially important are safety and security factors, such as crime and the quality of the streets and walking paths. Higher socioeconomic status (SES) is associated with lower neighborhood safety fears (Meyer et al., 2014).⁵ The latter relate to increased physical activity in community residents, in turn positively correlated with self-rated health and mental health (Meyer et al., 2014, Kim & Kawachi, 2017, Powell-Wiley et al., 2017).^{5–7} Greater safety concerns negatively impact activity consistency, especially in communities of color (Powell-Wiley et al., 2017).⁷ Nasar et al. (2015) showed that physical disorder in the environment (e.g., worn paint, overgrown or dry lawns, weeds, dilapidated and vacant or boarded-up buildings, cracked sidewalks and broken windows) significantly and consistently were reasons that African-American parents did not allow their children to walk on the streets.⁸ Also, neighborhood social environment significantly influences whether women living in disadvantaged areas attain recommended levels of leisure time physical activity (Timperio et al., 2015).⁹

Of all social environmental factors, perceived personal safety had the greatest influence on achieving recommended leisure time physical activity (Timperio et al., 2015).⁹ Further, in older adults, higher mean leisure time physical activity correlates with higher SES (Tucker-Seeley et al., 2009).¹⁰ Neighborhood safety in socioeconomically deprived communities affects chronic disease conditions that are preventable or controllable by physical activity or other health-seeking behaviors (Xiao et al., 2017, Kim & Kawachi 2017, Powell-Wiley et al., 2017).^{6,7,11} Such behaviors may also reflect resource availability and ability to seek well-being, including preventive health care utilization. Thus, to achieve recommended levels of physical activity, community members need to feel they have a safe place to exercise regularly.

Like most health-seeking behaviors, planners can employ theoretical models to predict and explain exercise behavior. Especially for chronic conditions requiring sustainable behavioral changes, researchers, planners and practitioners have especially used the Health Belief Model (HBM) in various settings and contexts and for diverse outcomes. Among HBM's constructs for behavioral change, attitudes and beliefs prominently impact perceived threat, benefits and self-efficacy, among others.

The HBM a psychological model that attempts to explain and predict health behaviors, by focusing on the attitudes and beliefs of individuals. The HBM was first developed in the 1950s by social psychologists Hochbaum, Rosenstock and Kegels working in the U.S. Public Health Service (Rosenstock 1974, Becker 1974).^{12,13} The model assumes that people will act if

they believe they can avoid a negative health condition, the action would be beneficial, and they can successfully make the change (Gristwood, 2011).¹⁴ The HBM also provides guidance on how to develop messages that persuade individuals to make healthy choices (National Cancer Institute, 2002).¹⁵

The HBM originally employed four constructs representing perceived threat and net benefits: susceptibility, severity, benefits and barriers. These concepts aimed to explain people's "readiness to act." An additional concept, *cues to action*, would activate that readiness and stimulate overt behavior. Also, in 1988, Rosenstock and others supplemented the HBM model with self-efficacy (SEF): confidence in one's ability to successfully perform an action. SEF was intended to help the HBM better fit the challenges of changing habitual unhealthy behaviors, such as sedentary lifestyle, smoking or overeating (Gristwood, 2011).¹⁴

Perceived susceptibility is individuals' belief that they are at risk of developing a condition. The perception of susceptibility may depend on lifestyle risk factors (Gristwood, 2011).¹⁴ *Severity* is individuals' understanding that a condition can have significant negative consequences. Examples are pain, disabilities, death and social consequences that could affect work and relationships (Gristwood, 2011).¹⁴ *Perceived benefits* mean that people think taking action, such as increasing physical activity, will decrease risks of or susceptibility to illness or condition. Perceived benefits motivate change. Individuals believe that *perceived barriers* will impede health behavior changes. Perceived barriers can be physical or psychological and are the strongest predictor of change (Gristwood, 2011).¹⁴ *Cues to action* are the factors driving individuals to act. Examples are events, media, how-to information and population-based health promotion (Gristwood, 2011).¹⁴

In 2015, Izumi et al. examined the impact of community health promoters on individual participation in physical activity programs, focusing on action cues.¹⁶ Community leaders increased social cohesion among groups, inducing consistent participation. Project objectives included finding ways to get the community engaged and informing the public on the perceived susceptibility and benefits, and engaging people in events to increase physical activity and live healthier lives. Wilson et al. (2015) looked at using environmental intervention to increase physical activity in underserved African-American communities. For adults, findings suggested the effectiveness of social marketing strategies aimed at perceived barriers and benefits.¹⁷

Understanding factors impacting the decision to walk can inform urban and rural environmental development, policy

and planning to improve conditions that encourage walking (U.S. Department of Health and Human Services, 2015).² Regarding safety and security, negative influences are inadequate lighting; presence of antisocial individuals, groups or behaviors; closed shops, parking lots or vacant land; and inadequate sidewalk safety (e.g., cracked, uneven, too close to the road). Positive influences are programs supporting walking groups (Kwarteng et al., 2018).¹⁸ Individuals feel safer walking in groups than when alone. Trees and foliage for shade, natural light, cleanliness and walking paths or trails are aesthetics that positively influence walking (Dadpour et al., 2016).⁴ Individuals' values, beliefs and attitudes crucially influence their health behavior, including physical activity.

Research shows that physical activity substantially benefits health. Specifically, walking is easily accessible and available to all individuals with the capacity (Van Cauwenberg et al., 2014).¹⁹ A 2011 study reported that walking was the most common activity in men and women (Watson et al., 2015).²⁰ Walking can provide transportation, socialization and exercise (U.S. Department of Health and Human Services 2015).² Thus, communities should foster this activity. Regarding the built environment, positive associations with walking frequency are neighborhood supports such as sidewalks, parks and cars that follow speed limits (Carlson et al., 2016).²¹ Also, lighting, cleanliness and street maintenance can prevent crime (Hong et al., 2014).²²

Purpose of the focus groups

As previously detailed, in 2014, Creighton University's Department of Health and Sciences Multicultural and Community Affairs (HS-MACA) through its office of Center for Promoting Health and Health Equity (CPHHE) was awarded a (3) three-year Racial and Ethnic Approaches to Community Health (Basic) Cooperative Agreement from the Center for Disease Control and Prevention (CDC). The agreement involves the creation of a new model for African Americans in Omaha Nebraska for reducing cardiovascular health disparities and its risk factors. CPHHE-REACH is a collaborative agreement with community-based agencies in the African-American community of Omaha (Douglas County), Nebraska to educate, develop, and implement policy, systems, and environmental (PSE) improvements that are conducive to healthier lifestyle choices that reduce or ameliorate chronic diseases.

Given chronic disease's frequency (one of every two adults) and physical activity's ameliorative potential, CPHHE-REACH strove to increase physical activity in local African-American communities (Kosoko-Lasaki

et al., 2017).²³ The focus group study's purpose was to assess behavioral changes and benefits of participating in physical activity through CPHHE-REACH for North Omaha African-American community members (Kosoko-Lasaki et al., 2017).²³ This study used the HBM to perform a qualitative thematic analysis of the focus group report (Kosoko-Lasaki, REACH team report)²⁴ and data (focus group participants' recorded statements). The goal was to determine relationships that may help predict further outcomes and interventions.

MATERIALS AND METHODS

Goals

The goals of the focus group study were to:

1. collect qualitative data about physical activity, health status and health-promoting behavior (including, knowledge, attitudes and behavior related to health and physical activity);
2. assess the effect of newly created physical activity opportunities for Northeast Omaha African Americans participating in the CPHHE-REACH project; and
3. identify whether participants believed the physical activity opportunities implemented were helpful/useful regarding increased physical activity (Kosoko-Lasaki et al., 2017).²³

Sample

Participants were identified from 12 predominantly African-American churches, 11 low-income residential housing authority towers and a local Federally Qualified Health Center (FQHC) that serves a majority African-American population (Kosoko-Lasaki et al., 2017).²³

An exempt status was granted by the Creighton University Institutional Review Board (IRB) for this project because no identifiable information was requested from the adult participants. For the focus groups, a convenience sample was sought, and a recruitment assignment protocol was used to ensure appropriate sampling randomizations. CPHHE-REACH advertised the focus group to its community partners and qualified candidates. All who expressed interest were given a date and time for the focus group meeting. Verbal consent was obtained individually from all participants before the formal start of each focus group. Individuals were given the option to decline participation. All participants were given an identification number and all identifiable information was excluded from the results. No protected health information or identifiable information was collected. The focus groups were audio

Table 1. Focus group questions.

What is your favorite physical activity?	What were your first impressions of CPHHE- REACH?
What was your attitude about physical activity before REACH?	What barriers prevented you from participating in physical activities?
What are post-REACH solutions you have found?	What lifestyle changes have you incorporated because of REACH?
What improvements would you suggest for REACH?	

recorded and then transcribed manually by evaluators. Each focus group had a maximum of 10–12 participants and the session lasted 1 h. Participants were given \$20 gift cards to cover the cost of transportation, parking and their time.

Inclusion and Exclusion

The inclusion criteria for the focus groups were participants between the ages of 21 to 80 years who were directly associated with CPHHE- REACH community partner organizations and provided informed consent. Exclusion criteria were those under age 21 or over age 80, no association with any CPHHE-REACH community partner organizations, and absence of informed consent (Kosokolasaki et al., 2017).²³

Participants

For this qualitative focus group activity, 56 ($n = 56$) participants represent the convenience sample. The participants were predominantly African American. More than 80% were female with an overall mean age of 55.5 years. The focus groups were conducted at four faith-based organization churches, two low-income multi-unit residential towers and one FQHC. To protect the identity and anonymity of participants' verbal responses in the focus group discussions, the facilitators obtained verbal consent and did not collect any demographic data.

Instrument

A group of seven open-ended questions were designed by the focus group facilitators (Table 1) to allow participants to discuss their viewpoints on their physical activity engagement since joining CPHHE-REACH at their community site. To ensure deep and broad responses and prevent researcher bias and suggestibility, the seven questions were designed to motivate participants' discussion of their views about their initial impression(s) of CPHHE-REACH, barriers to physical activity and lifestyle changes since participating in CPHHE-REACH physical activities. A pilot study of three focus groups was initially

conducted to time and validate reliability for the focus group instrument. Results from individuals in the pilot study were excluded from data analysis. Participants in the pilot focus groups further validated a question by either refusing to answer, amending it prior to responding according to their perspective, or by simply responding to the question within their personal perspective, which according to Tuckman and Harper is deemed valid from the actors' own perspective (Tuckman & Harper, 2012).²⁵

As previously stated, these questions were first pilot-tested among a small group of community participants and then validated by asking other REACH project community partners whether the questions represented what the communities wanted to express. The revisions in the final form of the questionnaire were based on the input from the pilot study.

Data collection tool (s)

Focus group data were collected using voice recording and notes. The voice recordings and notes were transcribed and compared for complete representation of participants' expressions.

Focus group procedure

The process started with a discussion regarding the necessity for ethical protections and Institutional Review Board (IRB) oversight. The Creighton University IRB granted the project an exempt status. However, the facilitators requested verbal consent from each focus group participant.

A pilot study with 10 individuals was conducted prior to the focus group activities. The purpose of the pilot study was to field test the questionnaire and modify the questions that were unclear to the participants. The pilot study also provided the facilitators practice with the questioning process and helped them determine the approximate duration of each discussion for logistical purpose.

After the pilot study, the focus group facilitators conducted six focus groups in African-American church sites, a non-profit FQHC and low-income multi-unit

Table 2. Major themes and operational sub-themes with selected quotes from (BLINDED) Omaha focus group participants within the Health Belief Model's constructs.

HBM Construct	Major Themes	Operational Sub-Themes	Selected Quotes
Susceptibility	- Disease	- High cholesterol - High blood pressure - Diabetes - Obesity	- "... we are more susceptible of being overweight and, which causes us to be unhealthy, diabetes, high blood pressure, all of those things"
Severity	- Disease Risk	- At risk of developing chronic conditions. - Social isolation - Fear	- "... if you don't keep moving, if you don't eat right, you don't drink right, you, you will suffer from something ..." - "Because uh most people are just sitting in their house all day ...: - "... there's so many people where we live in wheelchairs that is not totally handicapped and they depend on it, it it's all in laziness." - "I started staying home a lot, like I said, isolated, you know." - "... you know, it scared me, when it when uh your illness puts you into a scare that's what forced me, really made me exercise more because I don't like to take pills."
Benefits	- Health Improvements - Physical - Mental	- Health benefits to exercise - Losing weight - Feeling better about yourself - Less stress - More energy	- "... I think that if we exercise and learn more how to eat properly, then that could help us to uh, stay well, to get well, and to stay well." - "... when you start to see results, like when you start working out and you start to notice results and you notice that you are losing weight, to me, that encourages you keep going." - "... I learned really, it's good for your heart, and, and, you know, it keeps your heart strong you know." - "I've had more energy now, I've been trying to eat a lot...you know healthier so that my energy levels keep going up ..." - "Zumba helps you to be happier and to be less stressed ..."
Barriers	- Time Balance - Injury	- Time - Work balance - Physical injury and disability - Safety of the physical environment	- "... to exercise and feel comfortable and safe doing it." - "Time. I got too much going on." - "... for me it's my physical condition, it—the pain, and the knees, and my back ..." - "... the places that we stay at is so embedded with uh negativity ..." - "There so much drugs, like problem with drugs, like especially at my tower like with people like using needles and stuff, and like me finding ... I literally see like syringes like all over the ground."
Self-Efficacy	- Motivation - Motivators	- Willingness/intent - Positive attitudes - Camaraderie - Social cohesion - Social relationships with others in the community - Bringing people together - Accountability	- "You got to have somebody around, somewhere, to kind of give you that courage, and then, they will encourage somebody else and, and this is our job, to help one another ..." - "... it brings us together, you know, you have something to talk about, your health, your exercising, and the community thing to get together to bring others in." - "... it is a conscious effort to do better and eat better and [inaudible]. I think that's the hard part, it's sticking with it [inaudible] that consistency, trying to, you know, avoid what you know you shouldn't have." - "... has been to have the camaraderie, to the, that, the partner or to share with."

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HBM Construct	Major Themes	Operational Sub-Themes	Selected Quotes
Cues to Action	<ul style="list-style-type: none"> - Environmental design - Services - Health Promotion - Health Education - Care Access 	<ul style="list-style-type: none"> - Programs to help with healthy eating - Improved safety of the environment. - Health screenings - Implementing walking trails/paths - Disseminating more information 	<ul style="list-style-type: none"> - "... one of the things that I would like to do at church is health screenings like blood pressure, or cholesterol levels, or you know blood sugars, so people can actually know those numbers ..." - "if people knew what the pros and cons are of not exercising and exercising, that it, it might motivate them to do it ..." - "The parking lot is likewise mapped out, so we have it mapped out how many times you have to walk around each part to say that that's a mile." - "What I would like to see is the program, uh, um program in itself, with the diet, and uh, kind of like an itinerary as to what foods help with this portion of your body, and etcetera, how your exercise with that, times of day, if that's available ..."

HBM, Health Belief Model.

residential towers in the local African-American community. After participants arrived at the focus group site, they were greeted and introduced to CPHHE-REACH focus group facilitators and the purpose of the focus groups was clearly stated. Verbal consent was obtained, and the focus group discussion process began. Participants provided multiple responses to questions posed by facilitators. For accuracy, responses were audio recorded and transcribed.

The seven group of questions were organized, and a recursive data reduction process was performed. An initial open coding process embedded within the recursive data reduction process permitted each entry offered by every participant to be recorded and entered verbatim into the coding process. Data saturation, which refers to the point at which data is repeated, no new discovery emerges and the data are redundant (Bogdan & Biklen, 1998; Creswell & Plano Clark, 2017; Wright et al., 2014) allowed researchers to move through the open coding and recursive data reduction processes to the second phase of analysis, data display.^{26–28} The pilot study data were not entered for analysis.

Research design

Although the research was a mixed method, cross-sectional design, this paper reports on a qualitative secondary data analysis of a CPHHE-REACH focus group study (Kosoko-Lasaki et al., 2017)²³ that assessed behavioral changes in individuals participating in newly established physical activities in faith-based organizations,

local residential towers, and a FQHC in Omaha, Nebraska. Researchers also used the HBM to further investigate how community partnerships can increase the levels of physical activity in urban minority neighborhoods.

Data analysis

Major themes identified from focus groups included overcoming personal and environmental barriers, accountability and camaraderie, and better environment (Kosoko-Lasaki et al., 2017).²³ Thematic analysis (Tataw and Ekundayò, 2012) identified common themes in focus group data represented in Table 2.²⁹

Statements were grouped into operational sub-themes with the following features:

1. Associations and outcomes representing what participants and researchers identified.
2. Linkage to measurable outcomes and actionable interventions within the project.
3. Evaluation measures reflecting and assessing project objectives.

The objectives of CPHHE-REACH initiative include the promotion of policy, systems and environments (PSE) with a change in behavioral outcomes, such as the built environment, work-life balance, social cohesion and physical and mental health outcomes. Physical health outcomes, as mentioned by participants, included measurable biomarkers (e.g., serum cholesterol, blood

sugar) and physiological measures (e.g., blood pressure), as well as diagnostic categories for chronic cardio-metabolic conditions (e.g., diabetes). Mental health was identified with mainly self-reportable mental health symptoms (such as “feeling happier” – euphoria and “less stressed”). Sub-themes (theme components providing clear insight into how the themes are developed and operationalized in the study) were then collated into the specific themes that fit each of the constructs forming the theoretical framework of the HBM.

RESULTS AND DISCUSSION

We conducted six focus groups made up of 56 ($n = 56$) participants representing predominantly African-American faith-based organizations and churches (three focus groups, 25 participants), local low-income housing authority residential towers (two focus groups, 19 participants), and the local FQHC (one focus group, 12 participants). The participants' mean age was 55.5 years; 89% were African American and 11% Caucasian. Out of the 56 participants, 83.4% were women ($n = 44$) and 21.4% were men ($n = 12$) (Kosoko-Lasaki et al., 2017).²³

There was a balanced mix of Baptist, Methodist, Seventh-Day Adventist and non-denominational religious identities (Kosoko-Lasaki et al., 2017).²³ REACH administrators aimed at achieving representative perspectives from all participating community partners.

Based on the HBM and this study's thematic analysis (Table 2), the six constructs indicated nine major themes and elements as follows:

- Susceptibility: disease conditions, mainly cardio-metabolic diseases
- Severity: disease risk factors, mainly social isolation and sedentary lifestyle
- Benefits: mental and physical health improvements
- Barriers: time balance and injury
- Self-efficacy: motivation and motivators
- Cues to action: environmental design and services
- Services: health promotion, health education and care access/utilization, related to the built environment.

For each major theme, operational sub-themes emerged as follows:

- Disease: 1) high cholesterol, 2) high blood pressure, 3) diabetes and 4) obesity.
- Disease risk: 1) genetics or living an unhealthy lifestyle, 2) social isolation due to physical limitations and 3) fear of disease. Fear is also a sub-theme

mainly in the low-income residential towers, where residents found their environment to be unsafe. This could also mean a perceived severity or susceptibility

- Health improvements; losing weight, feeling better about themselves, less stress and more energy.
- Time balance: 1) balancing time with their work schedule, such as having too many things going on and being exhausted after work; and 2) finding time to exercise.
- Injury: 1) physical injury and disability, such as knee or back pain; and 2) safety from perceived injury risk in the physical environment due to drugs and alcohol in their communities.
- Motivation and motivators: there were four operational sub-themes: 1) willingness and intent to engage in physical activities, 2) positive attitudes, 3) camaraderie and 4) social cohesion, such as social relationships with others in the community, bringing people together and accountability. These sub-themes were found to play an important role in bringing community members together to engage in physical activity. Specifically, participants noted building social relationships, which resulted in holding each other accountable for attending exercise classes and making a health behavior change.
- Environmental design: 1) implementing walking trails/paths and 2) improved safety of the environment. Participants enjoyed the walking paths implemented at some of the faith-based organizations.
- Services: 1) programs to help with healthy eating, 2) health screenings and 3) disseminating more information. Participants indicated interest in health screenings because knowing their cholesterol and blood pressure values motivated change. They also expressed interest in obtaining more information about a healthy lifestyle, such as diet education and exercise classes and their locations in their community.

Participants in the focus groups at faith-based organizations and the local community health center were highly motivated and had positive attitudes toward physical activity. In contrast, local low-income residential tower residents negatively viewed physical activity because they considered their physical environment unsafe. These findings match those of other studies (Fish et al., 2010, Tucker-Seely et al., 2009),^{10,30} indicating that older adults who perceive neighborhood environments as unsafe have a lower average of leisure time physical activity and are more likely to be obese. Residential tower residents' main concerns included drugs, alcohol, fighting, disrespect for

tower community items/infrastructure and increased sense of insecurity. These factors enhanced tower residents' emotional stress and negativity, further barriers to participants' physical activity, reducing motivation. Although participants may know the severe consequences of developing chronic conditions and the benefits of exercise, barriers such as perceived availability, accessibility, cost, care/service quality and safety can impact the ability to change behavior.

A major theme throughout all focus groups was building social relationships and camaraderie. Such activities are known parts of social cohesion, supporting community resilience and the ability to engage in health-promoting activities in a safe environment. Our findings agree with Kim and Kawachi and others, who found that social cohesion enhances safety (Kim & Kawachi, 2017, Powell-Wiley et al., 2017, Xiao et al., 2017, McDaniel et al., 2015).^{6,7,11,31} Social cohesion also may promote health-seeking behavior and positive health outcomes. On the other hand, the positive health outcomes related to high social cohesion may also imply that communities with low social cohesion, which may be implicit in participants' statements, are vulnerable to poor health outcomes (Powell-Wiley et al., 2017, Xiao et al., 2017, Cozier et al., 2016, Powell-Wiley 2014, Black & Macinko 2010, Coogan et al., 2010).^{7,11,32–35} This perspective on how social cohesion influences health aligns with the assertions of Durkheim (anomie) 1893,³⁶ Merton (Social Structure and Anomie) 1938,³⁷ W.E.B. DuBois 1899,³⁸ Huschka et al., 2006 (racial segregation and anomie),³⁹ Paulo Freire, 1921 (dehumanization and anomie)⁴⁰ and others regarding social cohesion and health outcomes in communities and individuals. In the context of the focus group findings, the camaraderie was used to operationalize social cohesion, relating back to the self-efficacy construct in the HBM. Based on the findings of the CPHHE-REACH study, the implication is that self-efficacy is enhanced by social cohesion. The implementation of physical activities during church service, walking trails/paths, gardens and community exercise classes motivated individuals to hold each other accountable, which then led to a collective sense of camaraderie among participants. In the REACH focus groups, it was evident that many participants felt encouraged and accountable when they had other people to participate in physical activities with them.

The construct *cues to action* in the HBM focuses on an individual taking actions based on internal or external factors (Gristwood, 2011, Gray et al., 2016).^{14,41} Operationalization of this construct can include providing “how-to” information and promoting awareness (National Cancer Institute, 2002).¹⁵ It was clear throughout the focus groups that REACH motivated and encouraged individuals to not

only take part in more physical activities, but also to seek more information about and opportunities for living a healthy lifestyle (Tataw and Ekundayò, 2012).²⁹ Information-seeking for enhanced engagement in physical activities was important because many of the focus groups participants' suggestions for improvements in REACH promotion centered on dissemination of information and expanding physical activity day services. For example, some individuals wanted to have more information on healthy eating habits instead of focusing only on exercise. Others also wanted a place to get health screenings to keep track of their blood pressure, cholesterol and blood sugar levels. In the local residential towers, where the environment is perceived to be unsafe, many residents expressed interest in a dedicated “safe” place for physical activity.

The construct of *cues to action* is important because it addresses the external and internal factors that impede individuals' behavioral health changes. Community-wide campaigns, such as CPHHE-REACH, that aim to promote physical activity through education, community events and PSE improvements (Kosoko-Lasaki et al., 2017)²³ are one way to increase rates of physical activity to improve health outcomes in communities. Comparably, the Positive Action for Today's Health (PATH) trial (Wilson et al., 2015, Siceloff, Coulon & Wilson 2013),^{17,42} supports the effectiveness of social marketing strategies for increasing walking and physical activity in underserved African-American communities. These social marketing strategies were based on five specific areas of community marketing/education messaging to enhance physical activity in the community: 1) improved safety and accessibility for walking, 2) physical health, 3) mental health and well-being, 4) self-confidence for engaging in regular walking (self-efficacy) and 5) community connectedness.

Although there were similarities between findings in this and other studies regarding the perceived safety of the environment and rates of physical activity, the current study has limitations. The focus groups were composed of mostly African-American females, limiting the generalizability of the results. Also, participants may not have shared their true perspectives about CPHHE-REACH because REACH staff facilitated the conversations. Focus group findings do show that participants thought they were in better health post-REACH. However, a limitation is that, although a REACH-induced behavioral health change was identified, no data addressed whether participants were in better health. Examples of the latter would be lower cholesterol, blood pressure or weight.

This study has strengths and weaknesses. A cross-sectional study does not reflect trends over time. Thus, the consistency of the project's effects on the

communities engaged cannot be determined. A longitudinal study may help clarify issues related to effect consistency. A second significant weakness is that the study was performed within a specific population group that may have been biased by the effects of CPHHE-REACH activities in their areas. To address this confounder, a comparison study with similar characteristics may need to be performed under the same focus group conditions to identify true differences. A third weakness is that reliability and validity tests could be used to standardize the questions. A specific study using current data may help address this weakness.

Strengths included the fact that the sampling of opinion came from a wide variety of subgroups within the community, suggesting representative perspectives. A second strength was that participants could participate in only one focus group in a single location. This strategy helped to generate selection into different, independent focus groups and reduce cross-influences that may create bias. A third strength was that the focus groups participants tended to express similar opinions even when they were from different community settings. This may indicate some reliability and validity of the data.

IMPLICATIONS

This paper describes the use of focus groups to assess behavioral change regarding physical activity related to participating in community partnerships (REACH) in a primarily urban African-American neighborhood in Omaha, Nebraska. Findings from the focus group study indicate that participants from faith-based organizations and the local community health center experienced positive outcomes. In contrast, data from this study suggest an unsafe environment discouraged and reduced the motivation to participate in physical activity of individuals from low-income residential towers due to a perceived unsafe environment. The HBM as a theoretical framework suggests that, by targeting the constructs of perceived susceptibility, severity, benefits, barriers, self-efficacy and cues to action, an individual can achieve a positive, salutogenic behavior change.

Through this focus group study, we have identified the importance of personal and environmental barriers, self-efficacy and community partnerships. Key findings are that residents who felt safe in their environment had positive social, behavioral and health outcomes. In contrast, those whose neighborhoods are plagued by drugs/alcohol and violence may bear the burden of negative health outcomes. Our findings suggest that the role of building social relationships with others is not only to

motivate people to make a behavioral change, but also to hold them accountable. Overall, REACH Omaha did significantly help participants make positive behavioral health changes by providing information and health ambassadors to lead physical exercise activities.

Based on the findings from this study, researchers should study community-wide interventions and effective strategies, including enhancing social cohesion by facilitating effective social networks, as ways to increase physical activities in a wide array of communities. In future studies, more qualitative data should be collected from individuals to fully assess the effect of behavioral health changes. The qualitative data should be collected in conjunction with specific quantitative measures of health status. This way, REACH can demonstrate direct connections with health outcomes.

APPENDIX A. SUPPLEMENTARY DATA

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jnma.2019.01.001>.

REFERENCES

1. World Health Organization. (2018). *WHO Launches Global Action Plan on Physical Activity?*. <http://www.who.int/news-room/detail/04-06-2018-who-launches-global-action-plan-on-physical-activity> Accessed Nov. 29, 2018.
2. U.S. Department of Health and Human Services, Office of the Surgeon General. (2015). *Step It Up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities*. <https://www.surgeongeneral.gov/library/calls/walking-and-walkable-communities/index.html> Accessed Nov. 29, 2018.
3. U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2008). *2008 Physical Activity Guidelines for Americans*. <https://health.gov/paguidelines/guidelines/adults.aspx> Accessed Nov. 29, 2018.
4. Dadpour, S., Pakzad, J., & Khankeh, H. (2016). Understanding the influence of environment on adults' walking experiences: a meta-synthesis study. *Int J Environ Res Publ Health*, 13(7), E731.
5. Meyer, O. L., Castro-Schilo, L., & Aguilar-Gaxiola, S. (2014). Determinants of mental health and self-rated health: a model of socioeconomic status, neighborhood safety, and physical activity. *Am J Public Health*, 104(9), 1734–1741.
6. Kim, E. S., & Kawachi, I. (2017). Perceived neighborhood social cohesion and preventive healthcare use. *Am J Prev Med*, 53(2), e35–e40.
7. Powell-Wiley, T. M., Cooper-McCann, R., Ayers, C., et al. (2017). Change in neighborhood socioeconomic status and weight gain. *Am J Prev Med*, 49(1), 72–79.

8. Nasar, J. L., Holloman, C. H., & Abdulkarim, D. (2015). Street characteristics to encourage children to walk. *Transport Res Pol Pract*, 72, 62–70.
9. Timperio, A., Veitch, J., & Carver, A. (2015). Safety in numbers: does perceived safety mediate associations between the neighborhood social environment and physical activity among women living in disadvantaged neighborhoods? *Prev Med*, 74, 49–54.
10. Tucker-Seeley, R. D., Subramanian, S. V., Li, Y., et al. (2009). Neighborhood safety, socioeconomic status, and physical activity in older adults. *Am J Prev Med*, 37(3), 207–213.
11. Xiao, Q., Berrigan, D., Keadle, S. K., et al. (2017). Neighborhood socioeconomic deprivation and weight change in a large U.S. cohort. *Am J Prev Med*, 52(6), e173–e181.
12. Rosenstock, I. M. (1974). Historical origins of the health belief model. *Health Educ Monogr*, 2(4), 328–335.
13. Becker, M. H. (1974). The Health Belief Model and personal health behavior. *Health Educ Monogr*, 2(4), 354–386.
14. Gristwood, J. (2011). Applying the Health Belief Model to physical activity engagement among older adults. *Illuminare: A Student J in Recreation, Parks, and Leisure Studies*, 9(1), 59–71.
15. National Cancer Institute. (2002). *Theory at a Glance: A Guide for Health Promotion Practice*. Washington, D. C.: National Institutes of Health.
16. Izumi, B. T., Schulz, A. J., Mentz, G., et al. (2015). Leader behaviors, group cohesion, and participation in a walking group program. *Am J Prev Med*, 49(1), 41–49.
17. Wilson, D. K., Van Horn, M. L., Sicheloff, E. R., et al. (2015). The results of the “Positive Action for Today’s Health” (PATH) trial for increasing walking and physical activity in underserved African-American communities. *Ann Behav Med*, 49(3), 398–410.
18. Kwarteng, J. L., Schulz, A. J., Mentz, G. B., et al. (2018). Does perceived safety modify the effectiveness of a walking-group intervention designed to promote physical activity? *Am J Health Promot*, 32(2), 423–431.
19. Van Cauwenberg, J., Van Holle, V., De Bourdeaudhuij, I., et al. (2014). Using manipulated photographs to identify features of streetscapes that may encourage older adults to walk for transport. *PLoS One*, 9(11), e112107. <https://doi.org/10.1371/journal.pone.0112107>.
20. Watson, K. B., Frederick, G. M., Harris, C. D., et al. (2015). U.S. adults’ participation in specific activities: behavioral risk factor surveillance system—2011. *J Phys Activ Health*, 12(Suppl 1), S3–S10.
21. Carlson, S. A., Paul, P., Watson, K. B., et al. (2016). How reported usefulness modifies the association between neighborhood supports and walking behavior. *Prev Med*, 91, 76–81.
22. Hong, J., & Chen, C. (2014). The role of the built environment on perceived safety from crime and walking: examining direct and indirect impacts. *Transportation*, 41(6), 1171–1185.
23. Kosoko-Lasaki, O., Stone, J. R., Smith, J., et al. (2017). The Center for Promoting Health and Health Equality’s Racial and Ethnic Approaches to Community Health Program. *J Community Med Health Educ*, 7, 530.
24. Kosoko-Lasaki, O., Stone, J., Smith, J., et al. (2017). REACH Focus Group Report. Unpublished.
25. Tuckman, B. W., & Harper, B. E. (2012). *Conducting Educational Research* (6th Ed., 532). Rowman & Littlefield Publishers, 2012 ISBN:1442209658, 9781442209657.
26. Bogdan, R., & Biklen, S. K. (1998). *Qualitative Research for Education: An Introduction to Theory and Methods* (3rd Ed., 276). Allyn and Bacon, 1998; Original from the University of Michigan ISBN: 0205275648, 9780205275649.
27. Creswell, J. W., & Plano Clark, V. L. (2017). *Designing and Conducting Mixed Methods Research* (3rd Ed., 520). SAGE Publications, 2017 ISBN: 506394671, 9781506394671.
28. Wright, K. M., Duxbury, J. A., Baker, A., & Crumpton, A. (2014). A qualitative study into the attitudes of patients and staff towards violence and aggression in a high security hospital. *J Psychiatr Ment Health Nurs*, 21(Issue 2) (First published: 26 August 2013) <https://doi.org/10.1111/jpm.12108>.
29. Tataw, D. B., & Ekundayo, O. T. (2012). Prostate cancer risk factors, care utilization and policy options. focus group findings from an engagement with an African American urban community. *Am J Health Stud*, 27(1), 32–48.
30. Fish, J. S., Ettner, S., Ang, A., et al. (2010). Association of perceived neighborhood safety with [corrected] body mass index. *Am J Public Health*, 100(11), 2296–2303.
31. McDaniel, T. C., Wilson, D. K., Coulon, S. M., et al. (2015). Neighborhood social predictors of weight-related measures in underserved African Americans in the PATH trial. *Ethn Dis*, 25(4), 405–412.
32. Cozier, Y. C., Albert, M. A., Castro-Webb, N., et al. (2016). Neighborhood socioeconomic status in relation to serum biomarkers in the Black Women’s Health Study. *J Urban Health*, 93(2), 279–291.
33. Powell-Wiley, T. M., Ayers, C., Agyemang, P., et al. (2014). Neighborhood-level socioeconomic deprivation predicts weight gain in a multi-ethnic population: longitudinal data from the Dallas Heart Study. *Prev Med*, 66, 22–27.
34. Black, J. L., & Macinko, J. (2010). The changing distribution and determinants of obesity in the neighborhoods of New York City, 2003–2007. *Am J Epidemiol*, 171(7), 765–775.
35. Coogan, P. F., Cozier, Y. C., Krishnan, S., et al. (2010). Neighborhood socioeconomic status in relation to 10-year weight gain in the Black Women’s Health Study. *Obesity*, 18(10), 2064–2065.
36. Durkheim, E. (1952) [1893]. *De la division du travail social: étude sur l’organisation des sociétés supérieures*. Paris: Alcan. Translated Edition: Émile Durkheim (1984). *The division of labor in society* Free Press, New York. ISBN: 0029079500, 0029079608. Originally

- published: Emile Durkheim on the division of labor in society. New York : Macmillan, 1933 <https://ia800203.us.archive.org/12/items/deladivisiondutr00durkuoft/deladivisiondutr00durkuoft.pdf>.
37. Merton, R. K. (1938). Social structure and anomie. *Am Sociol Rev*, 3(5), 672–682.
38. DuBois, W. E. B. (1899). *The Philadelphia Negro*. New York: Lippincott.
39. Huschka, D., & Mau, S. (2006). Social anomie and racial segregation in South Africa. *Soc Indicat Res*, 76(3), 467–498.
40. Freire, P. (1921). *Pedagogy of the Oppressed*. New York and London: The Continuum International Publishing Group Inc. Trans.: Myra B. Ramos. (1970).
41. Gray, P. M., Murphy, M. H., Gallagher, A. M., et al. (2016). Motives and barriers to physical activity among older adults of different socioeconomic status. *J Aging Phys Activ*, 24(3), 419–429.
42. Sicheloff, E., Coulon, S., Wilson, D., et al. (2014). Physical activity as a mediator linking neighborhood environmental supports and obesity in African Americans in the PATH trial. *Health Psychol*, 33(5), 481–489.